User Manual

2 Mega Pixel

IP Vandal Dome Camera

WARINGS

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MISTURE.
DO NOT INSERT ANY METALLIC OBJECT THROUGH VENTILATION GRILLS.

CAUTION

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	

CAUTION：TO REDUCE THE RISK OF ELECTRIC SHOCK.
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

COPYRIGHT

THE TRADEMARKS MENTIONED IN THE MANUAL ARE LEGALLY REGISTERED TO THEIR RESPECTIVE COMPANIES.

Content

I. PREFACE 4

II. PRODUCT SPECIFICATIONS 4

III. PRODUCT INSTALLATION 6

A. MONITOR SETTING 6
B. HARDWARE INSTALLATION AND I/O PIN ASSIGNMENT 7
C. IP ASSIGNMENT 11
D. INSTALL ACTIVEX CONTROL: 14

IV. LIVE VIDEO 15

V. CONFIGURATION 17

A. SYSTEM 18
B. NETWORK 21
C. A/V SETTING 25
D. EVENT LIST 31

VI. NETWORK CONFIGURATION 37

VII. FACTORY DEFAULT 39

VIII. PACKAGE CONTENTS 39

APPENDIX I 39

V1.0

I. Preface

The IP Vandal Dome is a professional CMOS 2 Mega Pixel IP Vandal Dome Camera. It has a built-in web server which enables user to view real-time video via the IE browser. It also supports simultaneous video streaming using H.264/JPEG/ MPEG4 (3GPP only) video compression with CMOS Mega-Pixel Sensor which provides a smooth and high quality video. The video can be stored on the MicroSD card or remotely, and can be played-back remotely. The IP Vandal Dome is an easy-to-use IP Camera designed for 24/7 security applications.

II. Product Specifications

- IP66
- 2M CMOS Sensor
- Power over Ethernet (PoE) Support
- 18 IR LEDs Built-in
- Vandal-proof Metal Housing
- H.264/ JPEG/ MPEG4 (3GPP only) compression
- MicroSD card backup
- 2-way audio
- Support Cell Phone/PDA/3GPP
- Triplex Streaming Capabilities
- Free Bundle 36ch recording software

Specifications

Hardware	
CPU	ARM 9,32 bit RISC
DDR2	256MB
Flash	16M
Image sensor	1/3” CMOS (2M-Pixel)
Lens Type	Vari-focal 2.7~9mm Mega Pixel Lens
ICR	Mechanism IR Cut Filter
LED	Built-in 18 IR LED

I/O	1in/1 relay out
Video Out	1 Vp-p, 75 Ohms
Audio in	1 (RCA Type)
Audio Out	1 (RCA Type)
Power Over Ethernet	Yes
Power Consumption	DC 12V, 560mA
Dimensions	142mm (W) x 142mm (L) x 100mm (D)
Network	
Ethernet	10/ 100 Base-T
Network Protocol	HTTP, TCP/ IP, UDP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP
System	
Video Resolution	1600x1200,1280x1024, 1280x960, 1280x720, 800x600, 640x480, 320x240, 160x120
CMOS setting	Night Mode, Brightness, Contrast, BLC, Sharpness
Triple Streaming	Yes
Image snapshot	Yes
Full screen monitoring	Yes
Privacy Mask	Yes, 3 different areas
Compression format	H.264/ JPEG/ MPEG4 (3GPP only)
Video bitrate adjust	CBR, VBR
Motion Detection	Yes, 3 different areas
Triggered action	Mail, FTP, Save to MicroSD card, Relay
Pre/ Post alarm	Yes, configurable
Security	Password protection
Firmware upgrade	HTTP mode, can be upgraded remotely
Simultaneous connection	Up to 10
Audio	Yes, 2-way(Duplex Support)
SD card management	
Recording trigger	Motion Detection, IP check, Network Status (wire Connection only), schedule, alarm
Video format	AVI, JPEG
Video playback	Yes

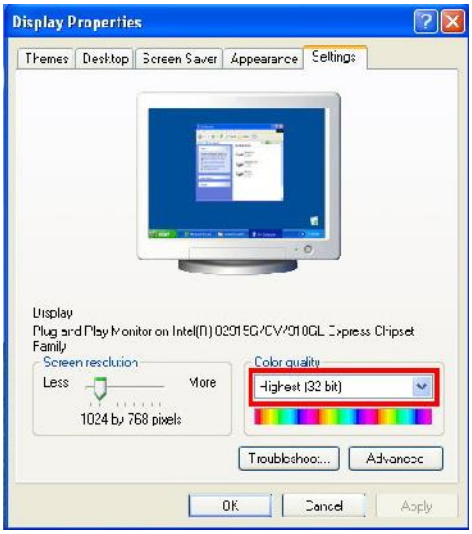
Delete files		Yes
Web browsing requirement		
OS		Windows 2000, XP, 2003, 7, Microsoft IE 6.0 or above
Hardware	Suggested	Intel Dual Core 1.66G,RAM: 1024MB, Graphic card: 128MB
	Minimum	Intel-C 2.8G, RAM: 512MB, Graphic card: 64MB

III. Product Installation

A. Monitor Setting

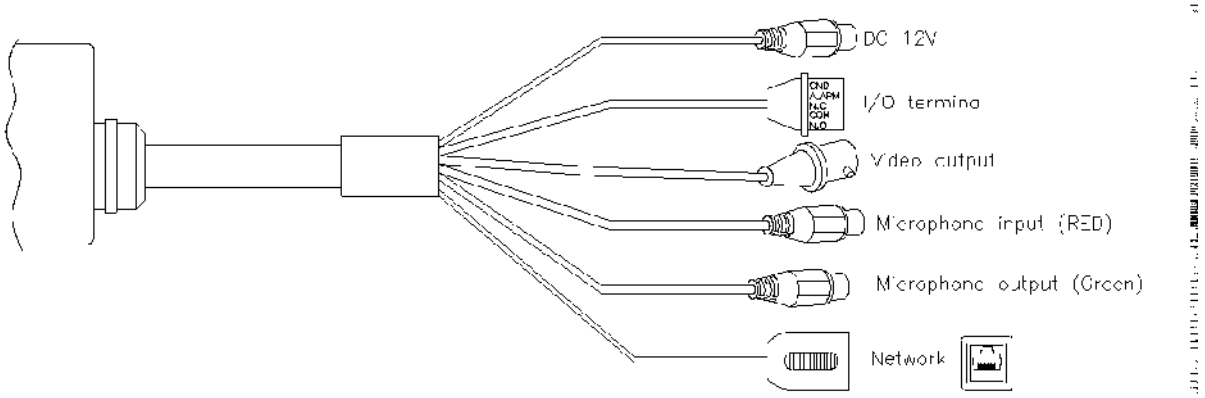
i. Right-Click on the desktop. Select “Properties” (windows XP) or “Screen Resolution” (Windows 7)

ii. Change color quality to highest (32bit).



B. Hardware Installation and I/O Pin Assignment

i. Connect a power adapter and network cable to the IP Camera for general operation



ii. I/O Control Instruction

I/O terminal connector – used in advanced applications (for ex. event triggering, alarm notifications, etc…). It provides the following Terminals:

1. Digital Input (GND + Alarm) – An alarm input for connecting devices that can toggle between an open and closed circuit, for example: PIRs, door/window contacts, glass break detectors, etc. When a signal is received the state changes and the input becomes active.
2. Relay output (COM +N.O.) / (COM+N.C.) – An output to Relay switch, for example: LEDs, Sirens, etc

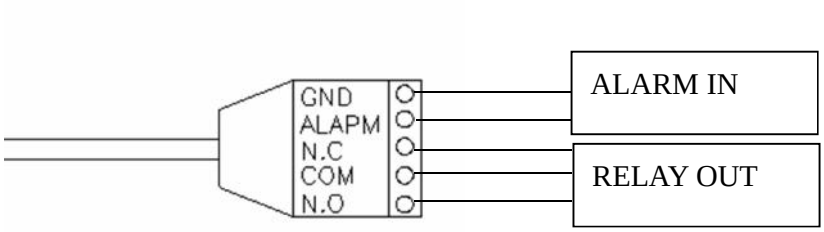
iii. Digital Input

Alarm Input

1. GND (Ground): Initial state is LOW
2. Alarm: Max. 50mA, DC 3.3V

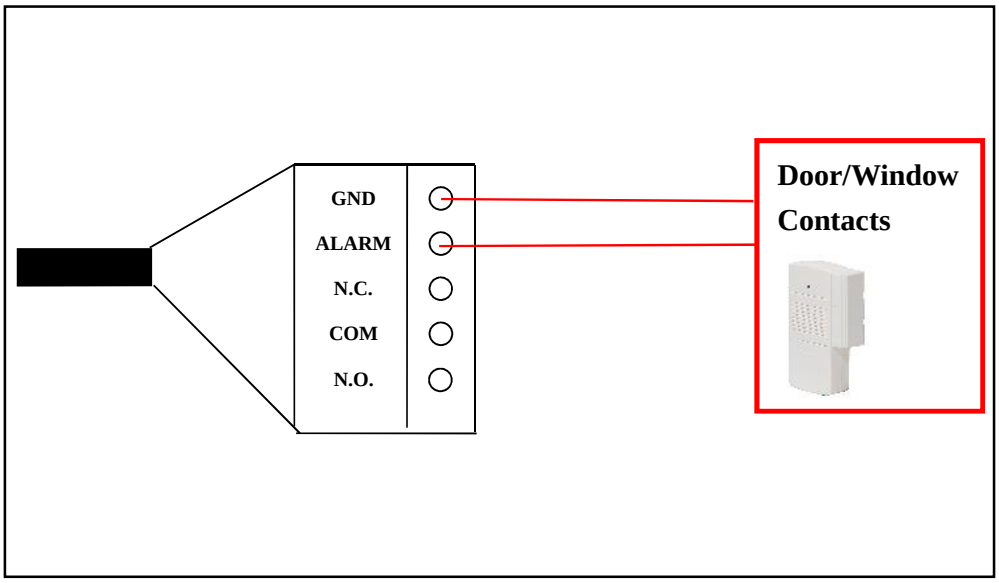
Relay Output

1. N.C. (Normally Close): Max. 1A, 24VDC or 0.5A, 125VAC
2. COM: (Common)
3. N.O. (Normally Open): Max. 1A, 24VDC or 0.5A, 125VAC

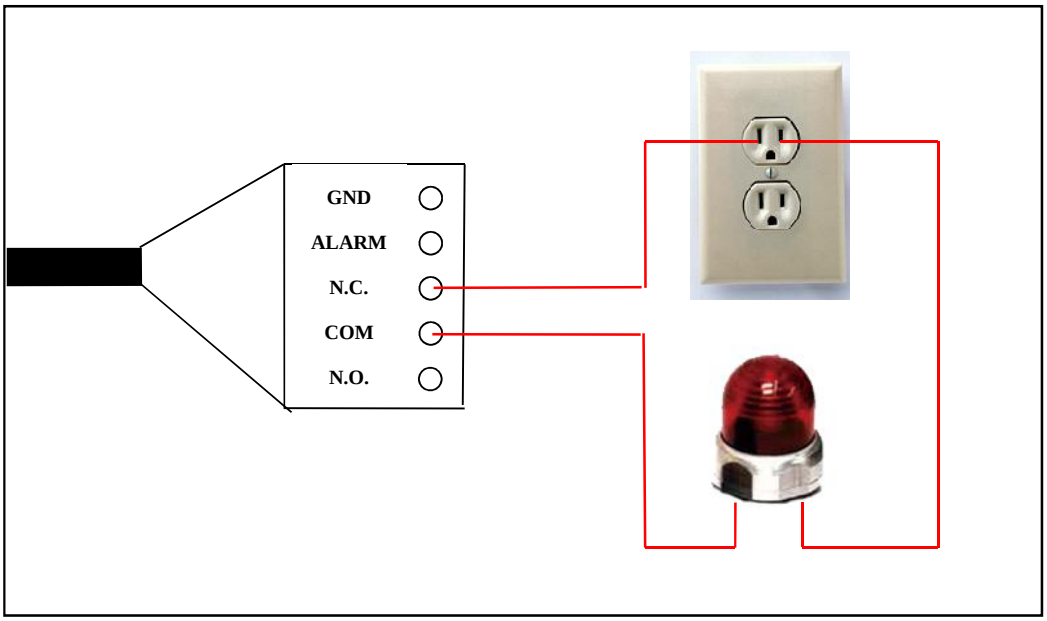


iv. Relay

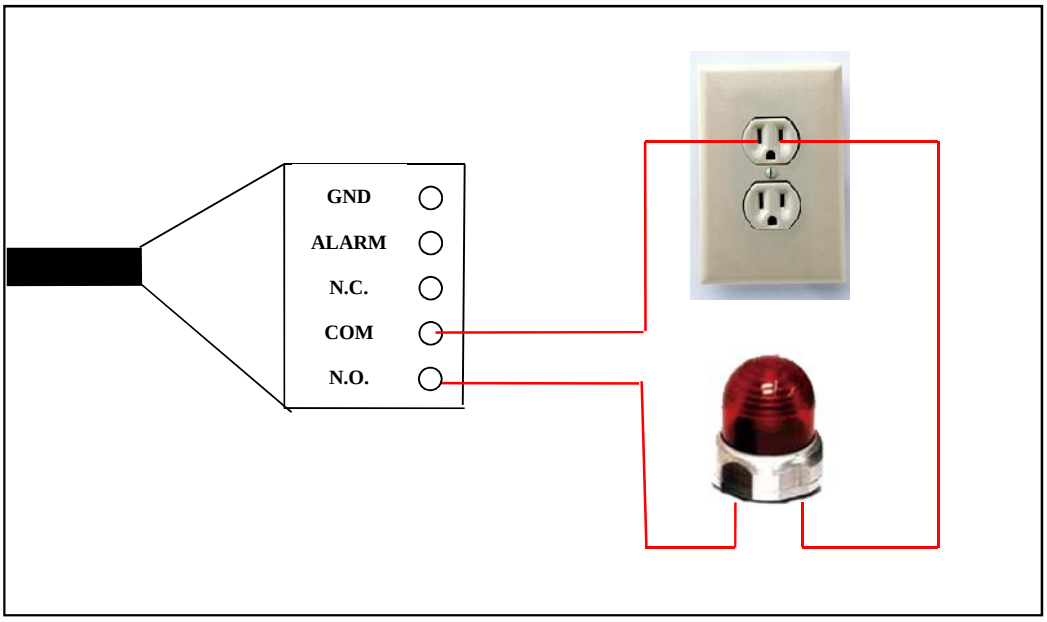
1. Digital Input connection



2. Relay Output Connection



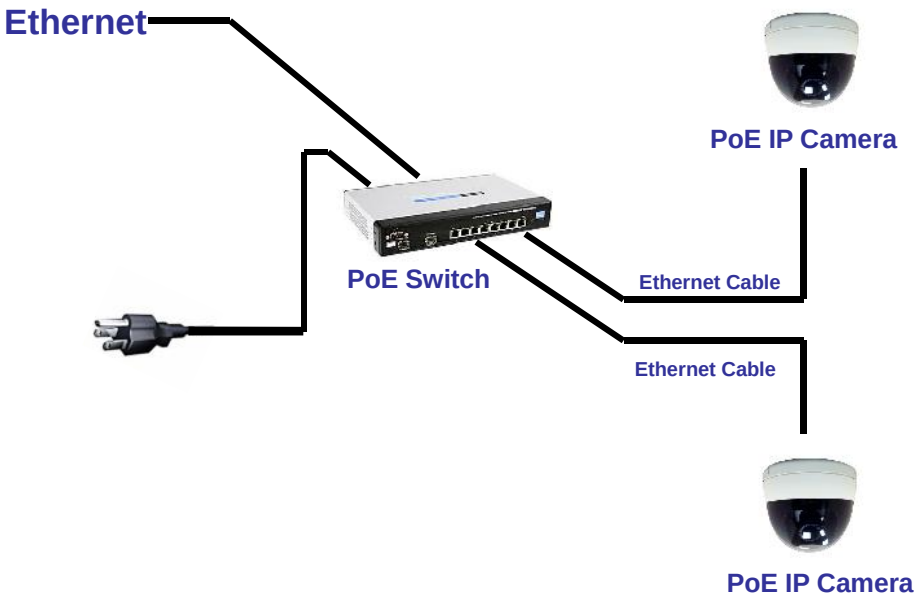
Or



v. PoE (Power Over Ethernet)(Optional)

802.3af, 15.4W PoE Switch is recommended

Power over Ethernet (PoE) is a technology that integrates power into a standard LAN infrastructure. It enables power to be provided to a network device, such as an IP phone or a network camera, using the same cable that is used for a network connection. It eliminates the need for power outlets at the camera locations and enables easier application of uninterruptible power supplies (UPS) to ensure 24 hours a day, 7 days a week operation.



C. IP Assignment

i. You can use the software, “IP Installer” to assign an IP address to the IP CAMERA. This software is included on the accompanying software CD.

ii. The “IP installer” software supports two languages
   a. IPInstallerCht.exe：Chinese version
   b. IPInstallerEng.exe：English version

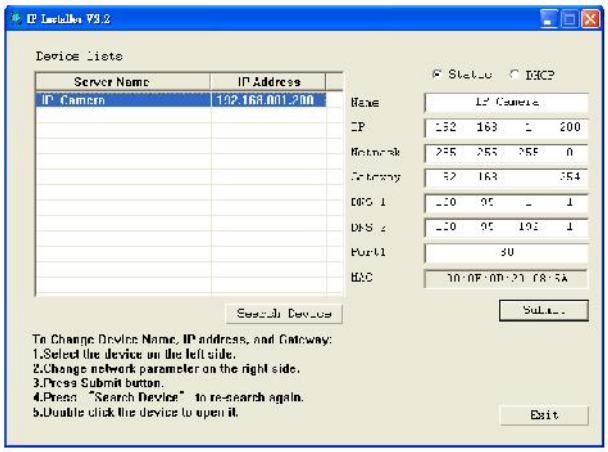
iii. There are 3 kinds of IP configurations.
   a. Fixed IP (Public IP or Private IP)
   b. DHCP (Dynamic IP)
   c. Dial-up (PPPoE)

iv. Execute the “IP Installer” software

v. The following message may popup. Please click “Unblock” or “Allow Access”.

Windows Security Alert
To help protect your computer, Windows Firewall has blocked some features of this program.
Do you want to keep blocking this program?
Name: IPInstaller V2.1 Network Device Scan
Publisher: Unknown
Keep Blocking
Unblock
Ask Me Later
Windows Firewall has blocked this program from accepting connections from the Internet or a network. If you recognize the program or trust the publisher, you can unblock it. When should I unblock a program?

vi. IP Installer configuration:



vii. The “IP Installer” Software will find all Active Vision IP Cameras connected to your network. The user can click “Search Device” to search again.

viii. Click on one of the IP Cameras in the device list, the network configuration for this IP camera will be shown on the right side. You may change the “name” of the IP Camera and network parameters to your preference (eg: Office, warehouse). To save the parameters click “Submit” then click “OK”. Your new settings will be applied and the device rebooted.

ix. Please make sure the subnet of the PC and the IP camera are the same.

Example of the same subnet:

IP CAM IP address: 192.168.1.200

PC IP address: 192.168.1.100

Example of different subnets:

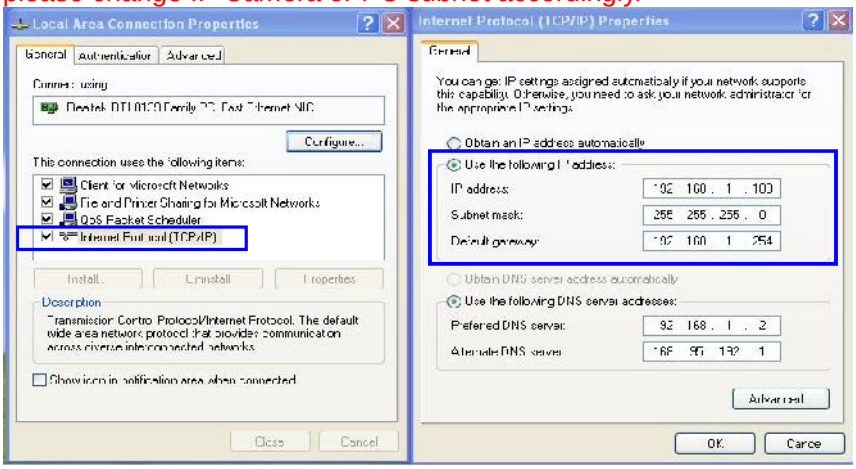
IP CAM IP address: 192.168.2.200

PC IP address: 192.168.1.100

To Change PC IP address on Windows XP:

Click the Start Menu → Control Panel → Network Connections → Local Area Connection Properties → Internet Protocol (TCP/IP) → Properties

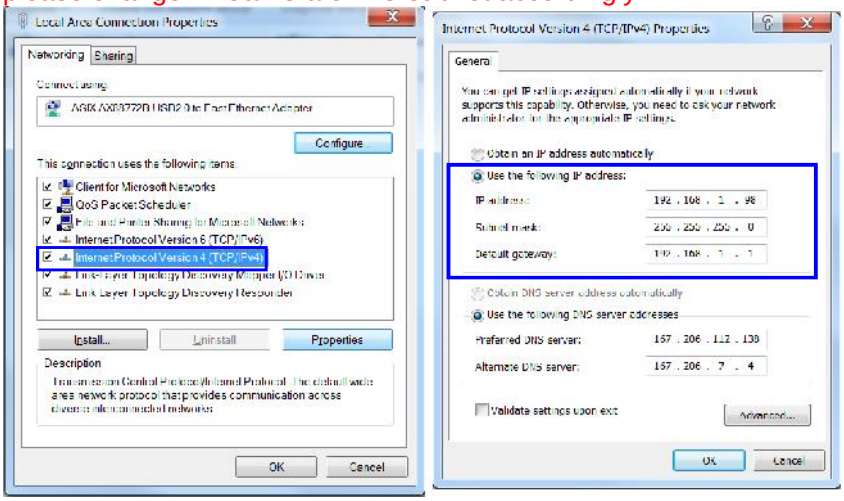
Please make sure your IP Camera and PC have the same Subnet. If not, please change IP Camera or PC subnet accordingly.



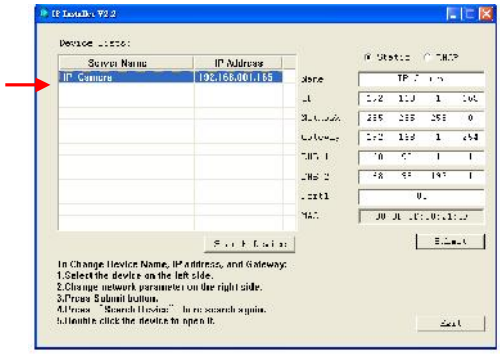
To Change PC IP address on Windows Vista/7:

Click the Start Menu → Control Panel. Near the top right of the control panel window you will see a box that says “Search Control Panel”. Type “Network Connections” in the search box, under “Network and Sharing Center” click “View Network Connections”. Now you can right click on your network connection, Click Properties → Internet Protocol Version 4 (TCP/IPv4) → Properties.

Please make sure your IP Camera and PC have the same Subnet. If not, please change IP Camera or PC subnet accordingly.



x. A quick way to access remote monitoring is to double-click the mouse on a selected IP Camera listed on “Device list” of the IP Installer. Your default browser will open and try to view the IP Camera. Note: Internet Explorer is the only officially supported Web browser.



xi. Then, please key in your username and password (default “user name: admin” and “password: admin”.)

D. Install ActiveX control:

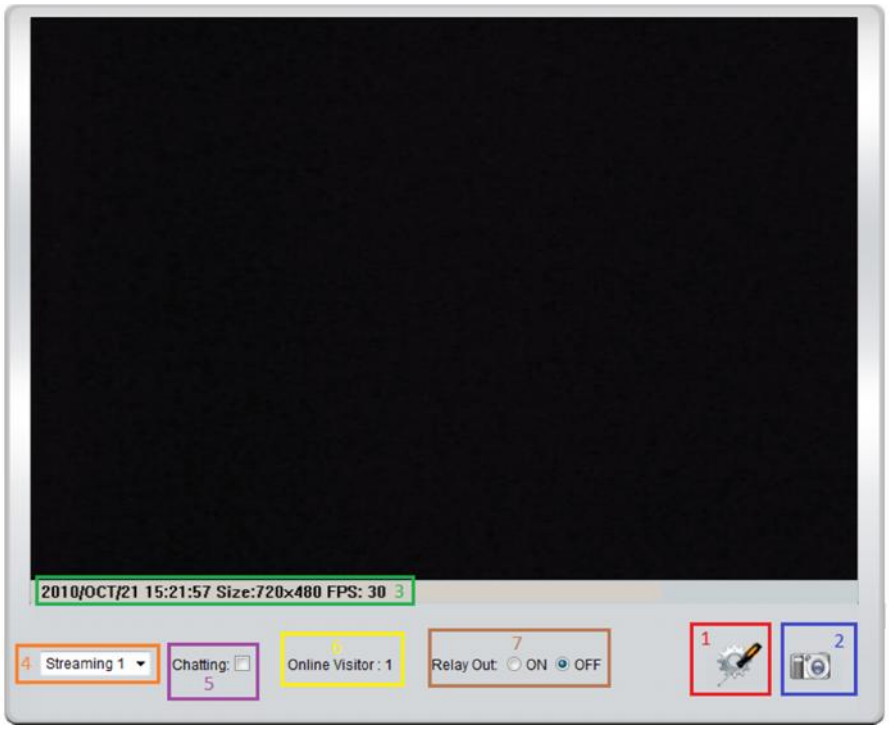
The first time you try to view the IP Camera using Internet Explorer, You will be prompted to install an ActiveX control.

If the installation failed, please follow the instructions in Appendix XX.

IV. Live Video

To view live video from the IP Camera, open an Internet browser and type the IP address of the IP camera in the address field. You will be prompted with the following dialogue box, key-in your user name and password (The default user name and password are “**admin**” and “**admin**”).

When connect to the IP CAMERA, The following program interface is displayed.

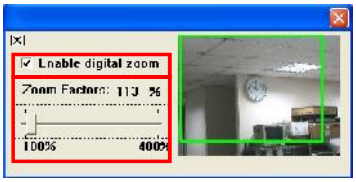


1. ：Click this to enter the configuration settings for the IP Camera
2. ：Click this button to take a snapshot of the IP Camera video image
3. This will display the system time, video resolution, and video frame rate
4. This allows you to select the video streaming source **(When stream 2 settings in the IP Camera settings are disabled, this function will not display)**
5. If the IP Camera supports 2-way audio, you can click the “Chatting” check box and then you can use a microphone which connects to the PC to talk to server side, which is IP Camera side
6. This displays the number of connected clients for this IP Camera
7. This manually controls the relay output which is connected to this camera.

You can double-click the video to change to full screen mode. To exit full screen mode press “Esc” or double-click the video again, it will change back to normal viewing mode.

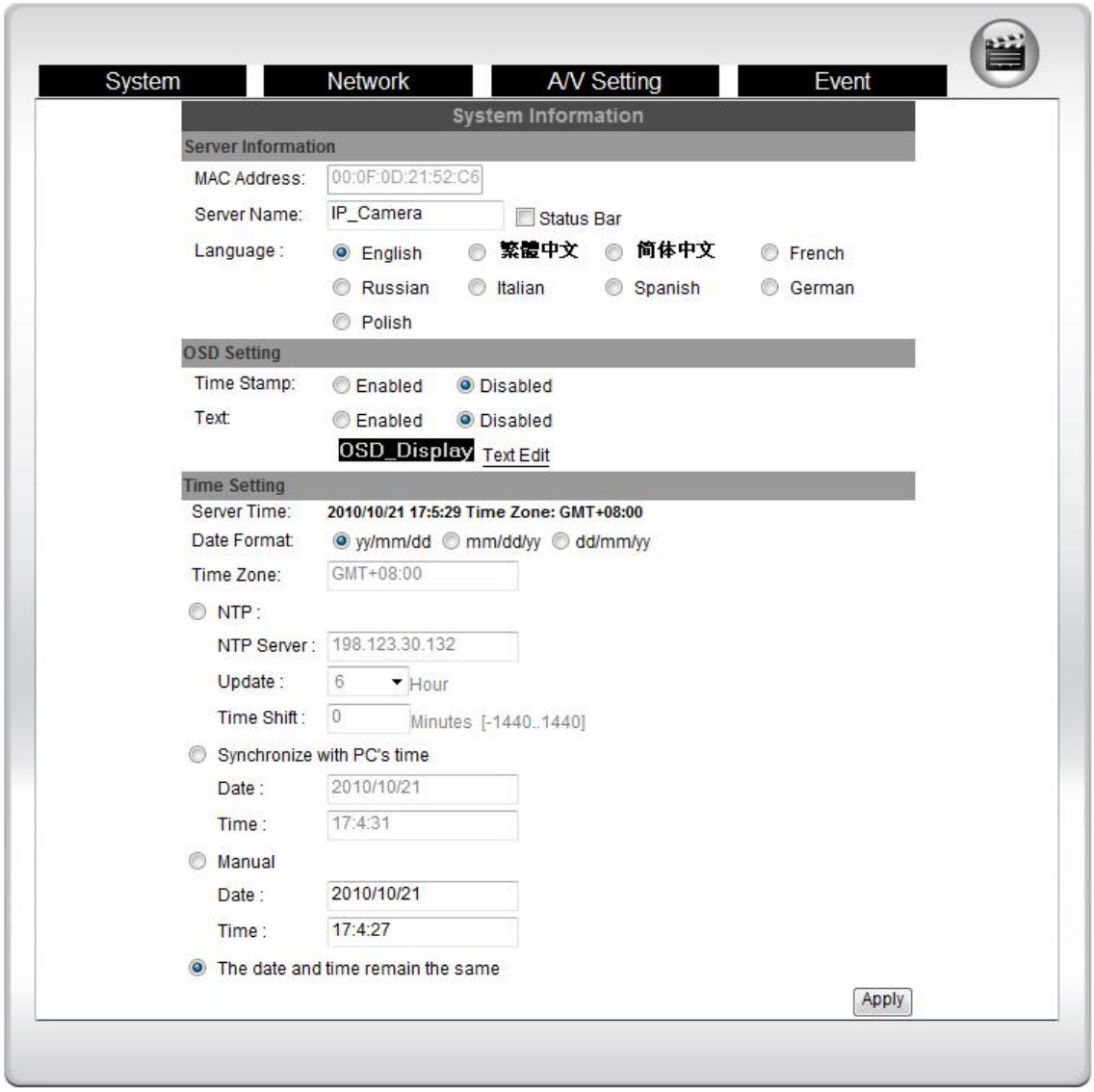
Right-Clicking the mouse on the video will cause a pop-up menu will be displayed.

1. Snapshot：Click this to save a JPEG picture
2. Record Start：Click this to record the video to the local PC. You will be prompted to select a location to save the video file. To stop recording, right-click the mouse again and click “Record Stop”. The recorded video format will be in the standard AVI format playable with Microsoft Media Player.
3. Mute：Click this to turn off audio. Click it again to turn it on.
4. Full Screen：Click this to enter full-screen mode.
5. ZOOM: Click this to enable the zoom-in and zoom-out functions. Click “Enable digital zoom”, then drag the slider bar to adjust the zoom factor.



V. Configuration

Click the icon to access the administration page. Click to go back to the live video page.



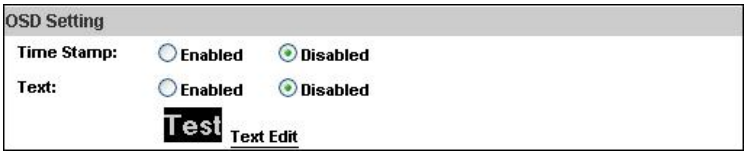
A.System

i、 System Information

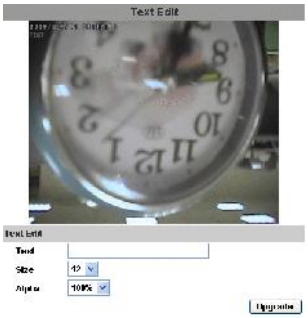
a. Server Information: Here you can setup the camera name, OSD, select the language, and set up the camera time.

1. Server Name：This is the Camera name. This name will show on the “IP Installer” software.
2. Language：Here you can change the language that the menu items are displayed in. After selecting a different language, the following dialogue box will be displayed to confirmation the changes.

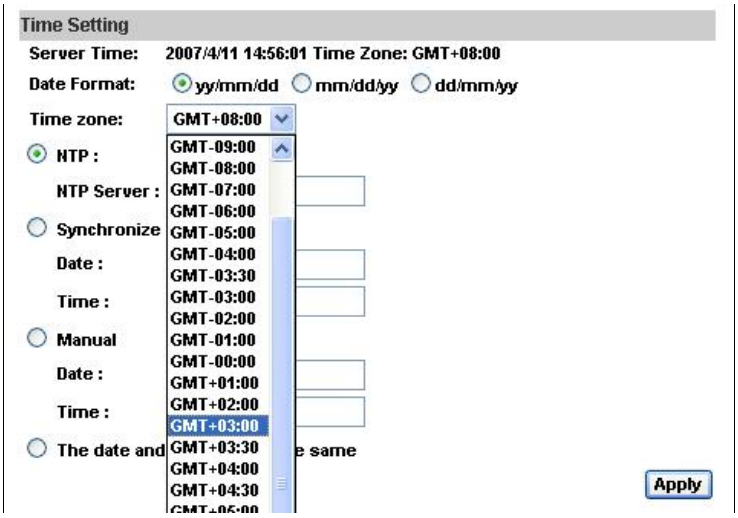
b. OSD Setting: Here you can change whether the time information is displayed on the video feed, as well as its location on the video feed and size.



You can click “Text Edit” to adjust the OSD contents including Size and Alpha (transparency) of text. Finally, click Upgrade button to save the setting.

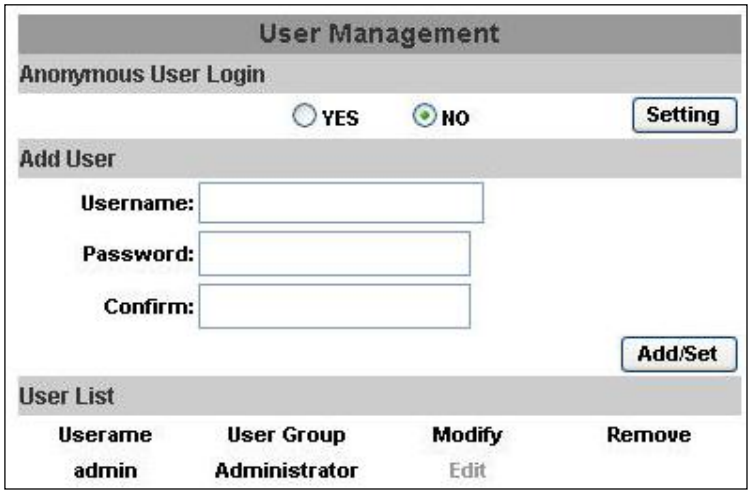


c. Time Setting：Here you can set the Date/Time format, Time Zone, as well as whether this IP Camera will synchronize its time with an online Time server (NTP), With a PC, or will be entered Manually.



ii、 User Management

This IP Camera supports three different user types: Administrator, General User, and Anonymous User.



a. Anonymous User Login：

Yes：This allows video to be displayed without requesting a username and password

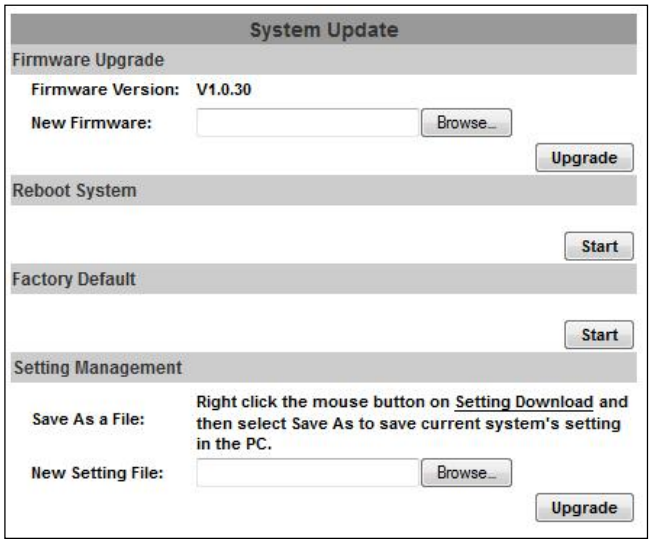
No：You will have to enter a username and password before accessing the video feed from this IP Camera.

b. Add user：

Here you can type a username and password, then click “Add/Set” to add a user to the IP Camera

c. You can click “Edit” or “Remove” to modify the user.

iii、 System update：



a. To update the firmware, click “Browse…” to select the firmware. Then click “Upgrade” to proceed.

b. Reboot system：re-start the IP camera

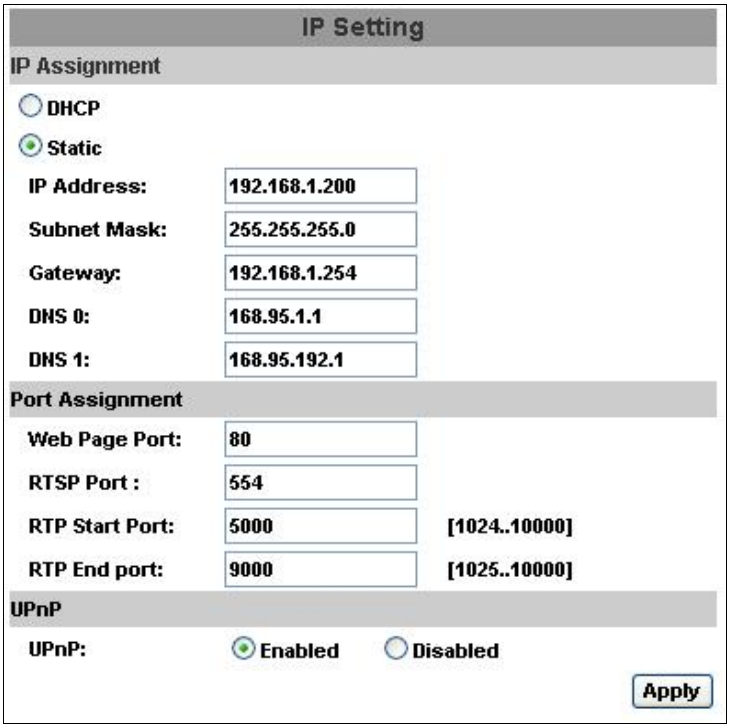
c. Factory default：Restore all settings in this camera to factory defaults.

d. Setting Management：User may download the current setting to PC, or upgrade from a previously saved settings file.

   1. Setting download:
      left-click the mouse button on “Setting Download” to download the settings file.
   2. Upgrade from a previous settings file:
      Click “Browse” to locate your settings file, then click “Upgrade” to upload your settings.

iv、 IP Setting

This IP Camera supports both DHCP and static IP addressing.



a. DHCP：Using DHCP, IP Camera will get all the network parameters automatically.

b. Static IP：Please type in IP address, subnet mask, gateway, and DNS manually.

c. Port Assignment: user may need to assign different port to avoid conflict when setting up IP assignment.

   1. Web Page Port: setup web page connecting port and video transmitting port (Default: 80)
   2. RTSP Port: setup port for RTSP transmitting (Default: 554)
   3. RTP Start and End Port: in RTSP mode, you may use TCP and UDP for connecting. TCP connection uses RTSP Port (554). UDP connection uses RTP Start and End Port.

d. UPnP

This IP camera supports UPnP, If this service is enabled on your computer,

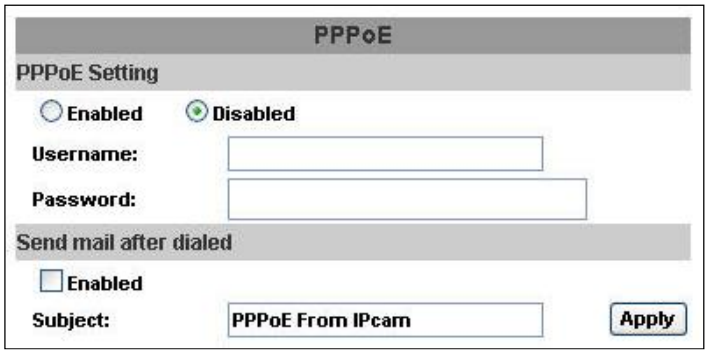
the camera will automatically be detected and a new icon will be added to "My Network Places."

Note: UPnP must be enabled on your computer.

Please follow the procedure to activate UPnP

1. open the Control Panel from the Start Menu
2. select Add/Remove Programs
3. Select Add/Remove Windows Components and open Networking Services section
4. Click Details and select UPnP to setup the service
5. The IP device icon will be added to "MY Network Places"
6. User may double click the IP device icon to access IE browser

v、 PPPoE：



Select "Enabled" to use PPPoE.

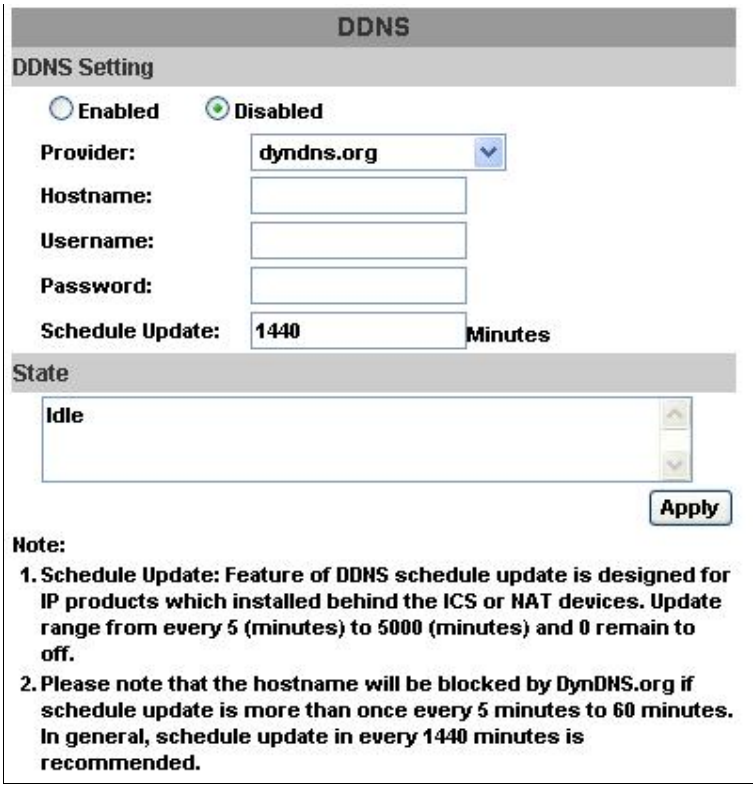
Key-in Username and password for the ADSL connection.

Send mail after dialed：When connect to the internet, it will send a mail to a specific mail account. For the mail setting, please refer to "Mail and FTP" settings.

vi、 DDNS：

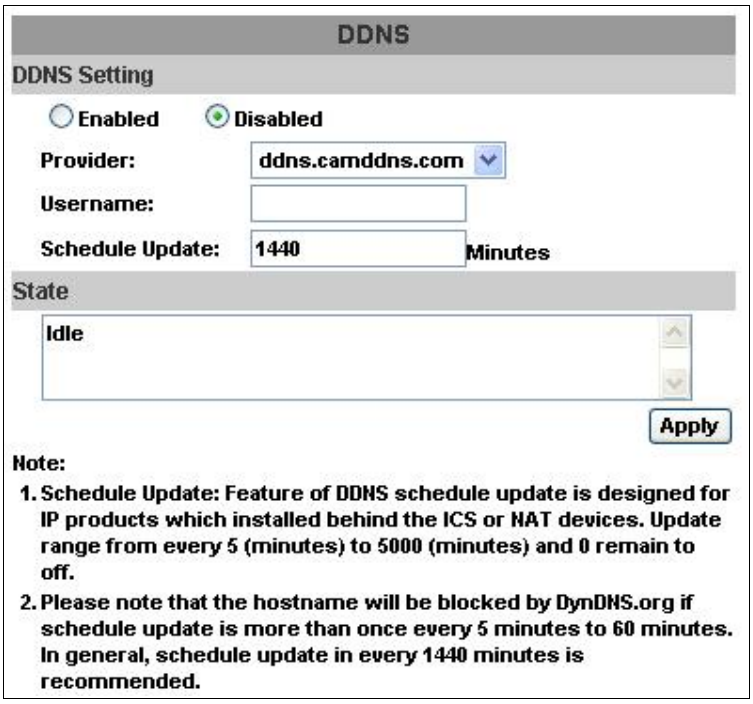
It supports DDNS (Dynamic DNS) service.

a. DynDNS：


DDNS
DDNS Setting
Enabled
Disabled
Provider:
dyndns.org
Hostname:
Username:
Password:
Schedule Update:
1440
Minutes
State
Idle
Apply
Note:
1. Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.
2. Please note that the hostname will be blocked by DynDNS.org if schedule update is more than once every 5 minutes to 60 minutes. In general, schedule update in every 1440 minutes is recommended.

1. Enable this service
2. Key-in the DynDNS server name, user name, and password.
3. Set up the IP Schedule update refreshing rate.
4. Click “Apply”
5. If setting up IP schedule update too frequently, the IP may be blocked. In general, schedule update every day (1440 minutes) is recommended.

b. Camddns service：


DDNS
DDNS Setting
Enabled
Disabled
Provider:
ddns.camddns.com
Username:
Schedule Update:
1440
Minutes
State
Idle
Apply
Note:
1. Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.
2. Please note that the hostname will be blocked by DynDNS.org if schedule update is more than once every 5 minutes to 60 minutes. In general, schedule update in every 1440 minutes is recommended.

1. Please enable this service
2. Key-in user name.
3. IP Schedule update is default at 5 minutes
4. Click “Apply”.

c. DDNS Status

1. Updating：Information update
2. Idle：Stop service
3. DDNS registration successful, can now log by http://<username>.ddns.camddns.com：Register successfully.
4. Update Failed, the name is already registered：The user name has already been used. Please change it.
5. Update Failed, please check your internet connection：Network connection failed.
6. Update Failed, please check the account information you provide：The server, user name, and password may be wrong.

B. A/V Setting

i、 Image Setting

For the security purpose, there are three areas can be setup for privacy mask. Click Area button first and pull a area on the above image. Finally, click Save button to reserve the setting.
Adjust “Brightness”, “Contrast”, “Hue”, “Saturation” to get clear video.

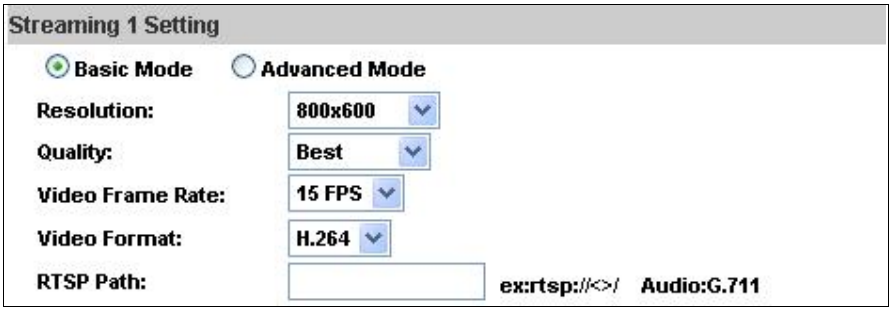
Adjust “Brightness”, “Contrast”, “Hue”, “Saturation” to get clear video. Moreover, IP CAMERA supports “Back Light Compensation”, “Night Mode” and “Video Orientation”.

ii、 Video Setting

User may select 2 streaming output simultaneously:
Streaming 1 Setting: Basic mode and Advanced mode
Streaming 2 Setting: Basic mode, Advanced mode, and 3GPP mode
(Max Video Frame Rate for both streaming combined is 30 FPS)

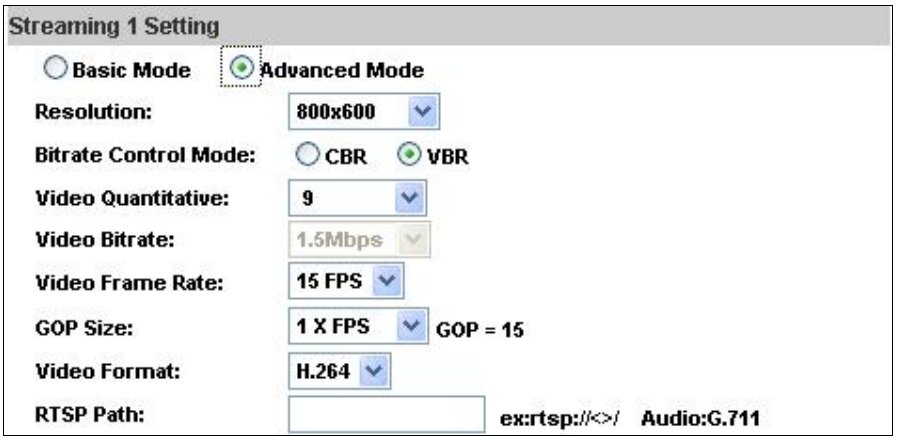
a. Video System: click the drop down list to select the system type

b. Streaming 1 Basic Mode：



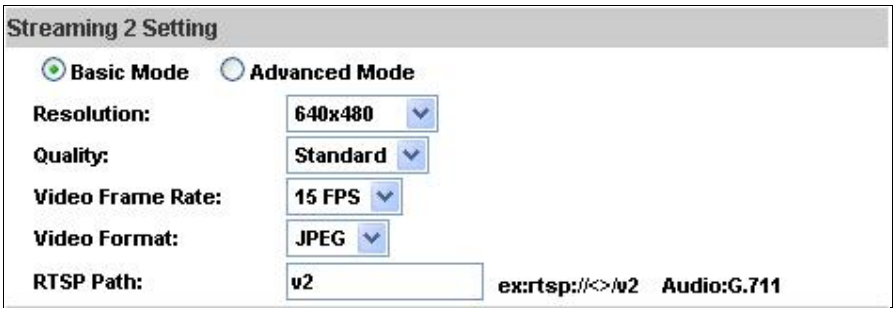
1. Resolution：
   There are 8 resolutions can be chosen.
   1600x 1200, 1280x1024, 1280x960, 1280x720, 800x600, 640x480, 320x240, 176x144
2. Quality：
   There are 5 levels to adjust:
   Best/ High/ Standard/ Medium/ Low
   The higher the quality is, the bigger the file size is. Also not good for internet transmitting
3. Video Frame Rate：The video refreshing rate per second.
4. Video Format：H.264 or JPEG
5. RTSP Path: RTSP output name

c. Streaming 1 Advanced Mode：



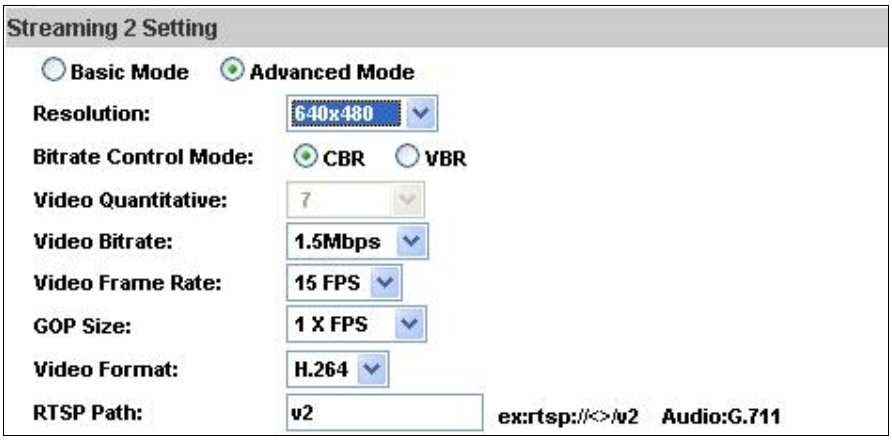
1. Resolution：
   There are 8 resolutions can be chosen.
   1600x 1200, 1280x1024, 1280x960, 1280x720, 800x600, 640x480, 320x240, 176x144
2. Bitrate Control Mode
   There are CBR〔Constant Bit Rate〕 and VBR〔Variable Bit Rate〕to use.
   CBR：32Kbps~4Mbps (the higher the CBR is, the better the video quality is)
   VBR：1(Low)~10(High) – Compression rate, the higher the compression rate, the lower the picture quality is; vise versa. The balance between VBR and network bandwidth will affect picture quality. Please carefully select the VBR rate to avoid picture breaking up or lagging.
3. Video Frame Rate
   The video refreshing rate per second.
   NTSC: Max 30 frames/second PAL: Max 25 frames/second
4. GOP Size
   It means "Group of Pictures". The higher the GOP is, the better the quality is.
5. Video Format：H.264 or JPEG
6. RTSP Path: RTSP output connecting route

d. Streaming 2 Basic Mode：



1. Resolution：
   There are 8 resolutions can be chosen.
   1600x 1200, 1280x1024, 1280x960, 1280x720, 800x600, 640x480, 320x240, 176x144
2. Quality：
   There are 5 levels to adjust:
   Best/ High/ Standard/ Medium/ Low
   The higher the quality is, the bigger the file size is. Also not good for internet transmitting
3. Video Frame Rate：The video refreshing rate per second.
4. Video Format：H.264 or JPEG
5. RTSP Path: RTSP output connecting route

e. Streaming 2 Advanced Mode：



1. Resolution：
   There are 8 resolutions can be chosen.
   1600x 1200, 1280x1024, 1280x960, 1280x720, 800x600, 640x480, 320x240, 176x144
2. Bitrate Control Mode
   There are CBR〔Constant Bit Rate〕 and VBR〔Variable Bit Rate〕to use.

CBR：32Kbps~4Mbps (the higher the CBR is, the better the video quality is)

VBR：1~10 (Compression Rate)

3. Video Frame Rate

   The video refreshing rate per second.

4. GOP Size

   It means "Group of Pictures". The higher the GOP is, the better the quality is.

5. Video Format：MPEG4 or JPEG
6. RTSP Path: RTSP output name

f. 3GPP Streaming mode:

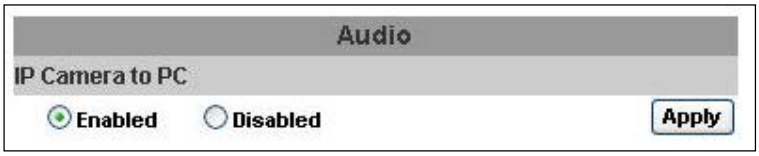
3GPP mode suggested setting: 176x144 resolution, 5FPS, MPEG4 format

1. Enable or Disable 3GPP Streaming
2. 3GPP: 3GPP output name

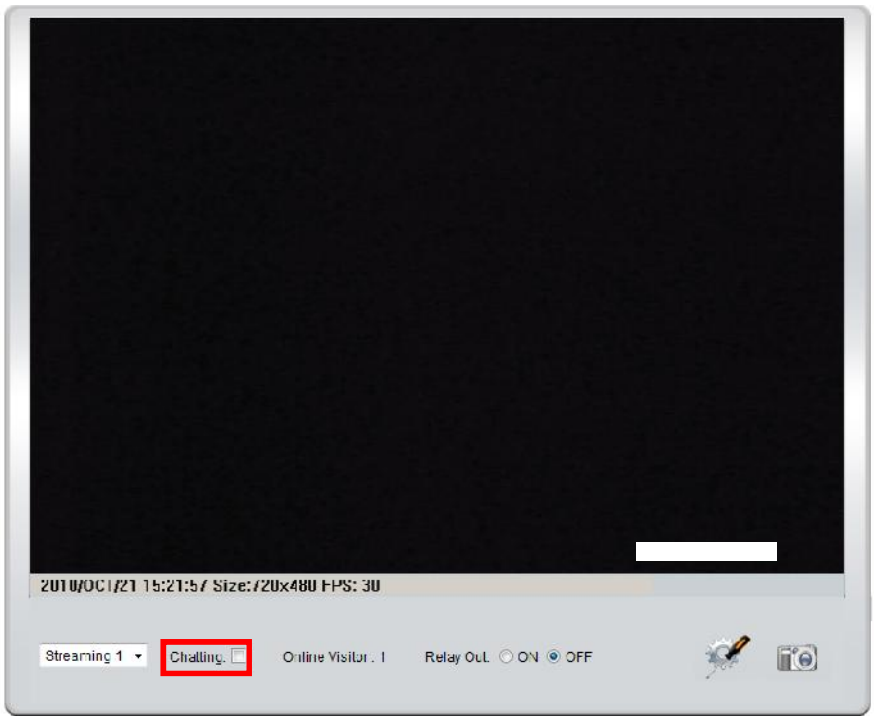
iii、 Audio：

IP CAMERA supports 2-way audio. User can send audio from IP Camera Built-in mic to remote PC; User can also send audio from remote PC to IP Camera's external speaker.

a. Audio from IP camera built-in mic to local PC: select "Enable" to start this function.



b. Audio from local PC to IP Camera: Check "chatting" in the browsing page.

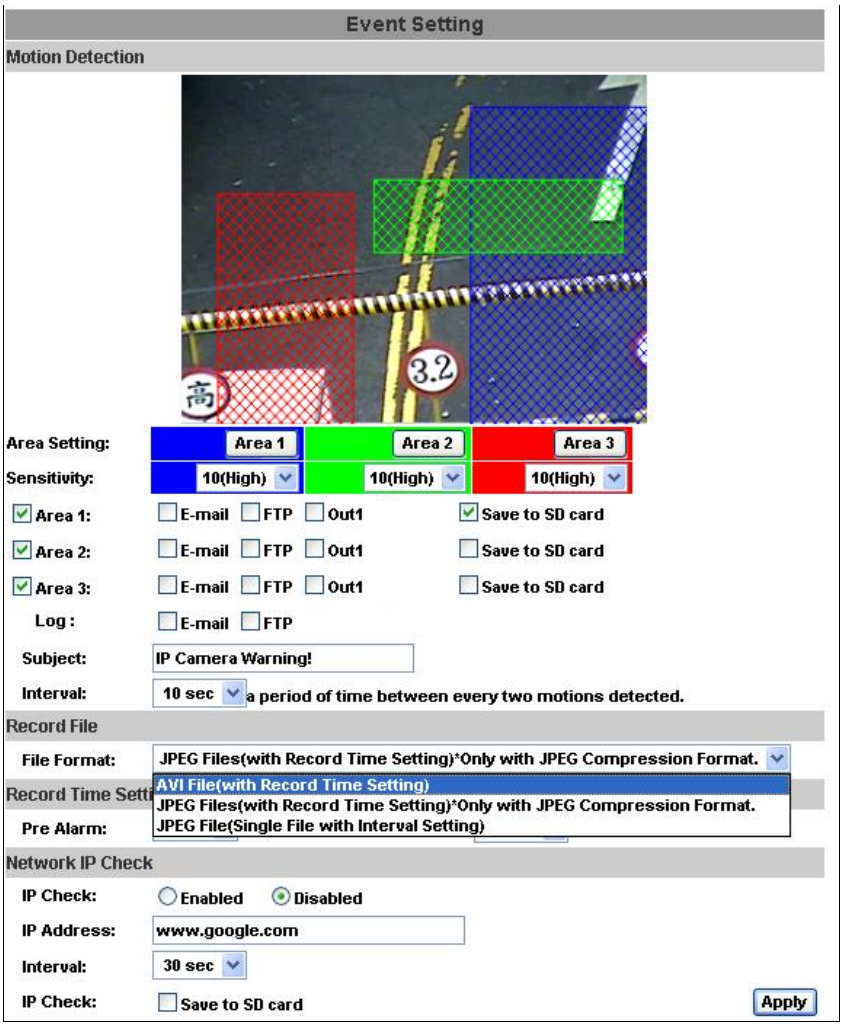


The Audio will not be smooth when enable SD card recording function simultaneously.

C.Event List

IP CAMERA provides multiple event settings.

i、 Event Setting



a. Motion Detection：

IP CAMERA allows 3 areas motion detection. When motion is triggered, it can send the video to some specific mail addresses, transmit the video to remote ftp server, trigger the relay, and save video to local SD card. To set up the motion area, click “Area Setting”. Using mouse to drag and draw the area. The same operation for area 2 and 3.

b. Record File Setting: IP CAMERA allows 3 different types of recording file to change its record size.

When motion/alarm is triggered, there are 3 different types of record mode.

1. AVI File (With Record File Setting)
2. Multi-JPEG (With Record File Setting), only with JPEG compression format.
3. Single JPEG (Single File with Interval Setting)

c. Record Time Setting：

Pre Alarm and Post Alarm setups for video start and end time when motion detected, I/O, or other devices got triggered.

Note: Pre/Post Alarm record time is base on record time setting and IP Cam built-in Ram memory. Limited by IP Cam built-in Ram Memory, When information is too much or video quality set too high, it will cause recording frame drop or decrease on post alarm recording time.

d. Network Dis-connected：

When the network is down, it will save the video to local SD card. This function is only enabled in wire connection.

e. Network IP check

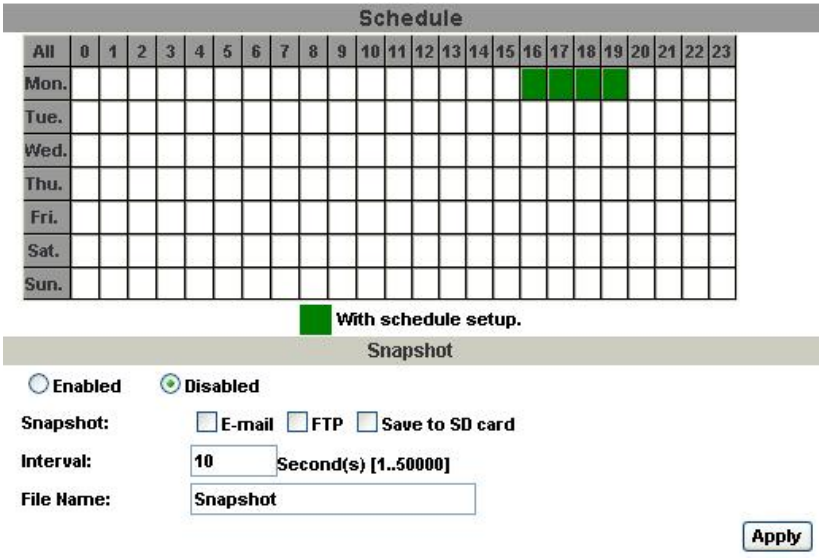
When the connection is down, it records the video to SD card. Make sure the video recording is continuous. To use this function, key in the IP address of the PC which has recording software installed. Enable the function of “Save to SD card”, then click “Apply”.

The interval of two video files on SD card is fixed with 30 seconds.

ii、 Schedule

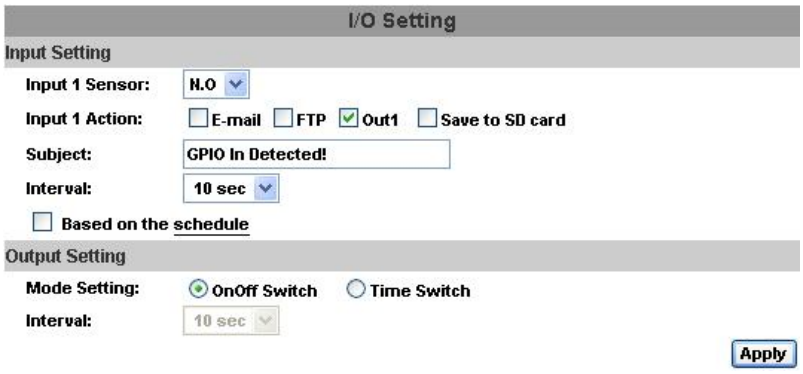
a. Schedule: After complete the schedule setup, the camera data will be recorded according to the schedule setup.

b. Snapshot: After enable the snapshot function, user can select the storage position of snapshot file, the interval time of snapshot and the reserved file name of snapshot.



iii、 I/O Setting

IP CAMERA supports 1 input/ 1 output. When input is triggered, it can send the video to some specific mail addresses, transmit the video to remote ftp server, trigger the relay, and save video to local SD card.



CATUTION!!

Please connect to propriety relay box to reduce the risk of electric shock & damaged.

Alarm Input Setting

By GPIO I/O port input that provide related action while I/O input triggered.

GPIO Output Setting

By GPIO I/O port output that provide OnOff Switch, Slide Switch & Pan/Tilt

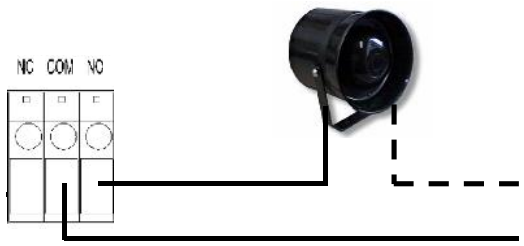
Module for using with relay box.

GPIO pin define please refer to the part of Front / Back plane & I/O port pin assignment

GPIO 0	ALARM INPUT Normal: 3.3V (The voltage differential from GPIO pin & GND) Active: 0V (GPIO 0 & GPIO1 link to PIN2 GND)
GPIO 1	
GPIO 2	ALARM OUTPUT Normal: 3.3V (The voltage differential from GPIO pin & GND) Active: 0V (GPIO 0 & GPIO1 link to PIN2 GND)
GPIO 3	

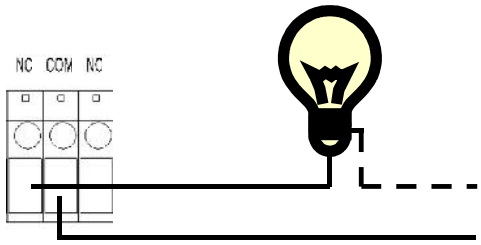
GPIO INSTALLATION EXAMPLE 1

Trigger a normal off (Normal Open) alarm siren on when event/motion occur at COM:



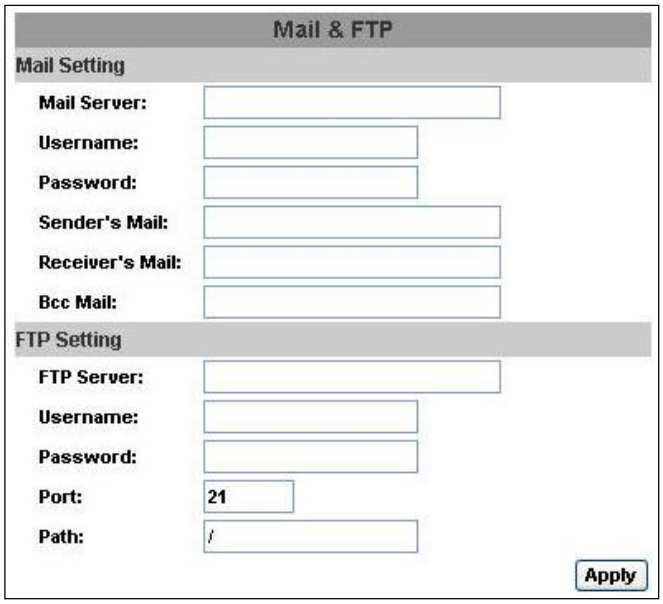
GPIO INSTALLATION EXAMPLE 2

Trigger the normal on (Normal Close) indoor illumination off when event / motion occur at COM:

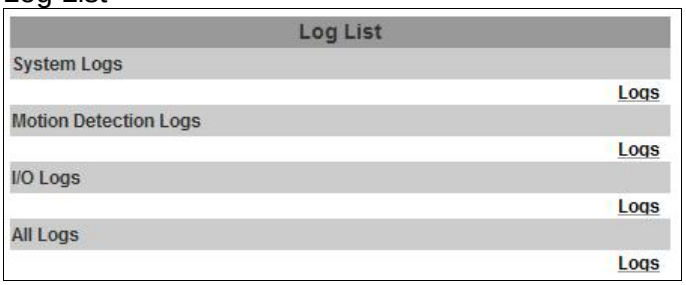


iv、 Mail & FTP

To send out the video via mail of ftp, please set up the configuration first.



v、 Log List



Sort by System Logs, Motion Detection Logs and I/O Logs. In addition, System Logs and I/O Logs won't lose data due to power failure.

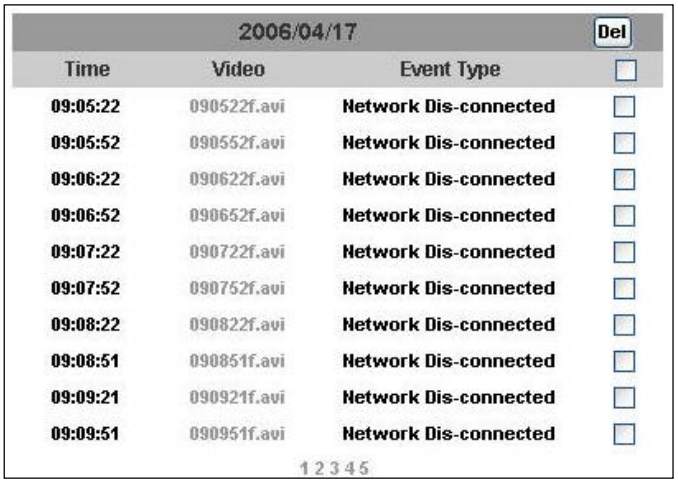
vi、 SD card

Please Insert SD card before use it. Make sure pushing SD card into the slot completely.

Note：The use of the SD card will affect the operation of the IP CAMERA slightly, such as affecting the frame rate of the video.

a. Playback：

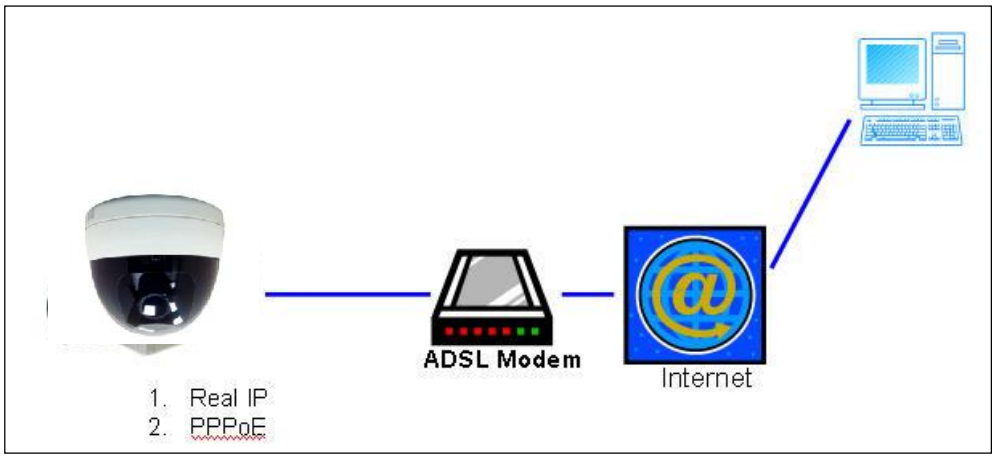
1. It will show the capacity of the SD card. Click the date listed on this page. It will show the list of the video.



2. The video format is AVI. Click the video to start Microsoft Media Player to play it.
3. To delete the video, check it, then click Del. When the SD card is full, it will remove the oldest video automatically.

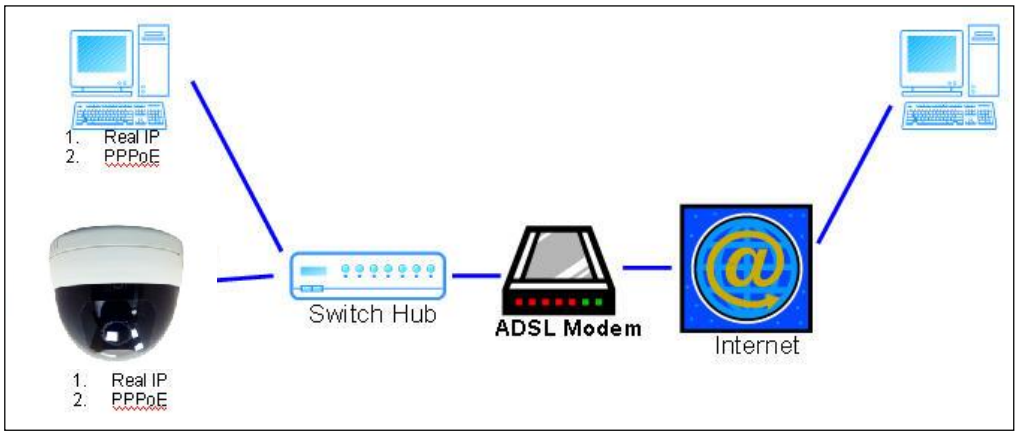
VI. Network Configuration

i、 Configuration 1：



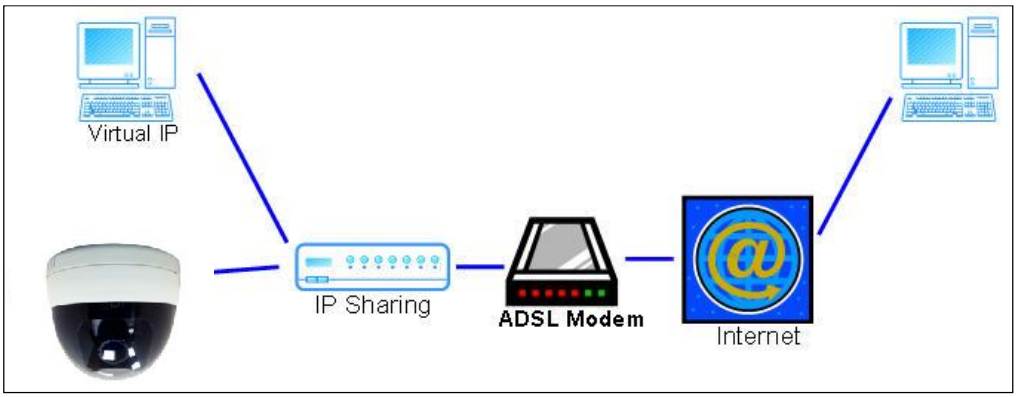
a. Internet Access：ADSL or Cable Modem
b. IP address：One real IP or one dynamic IP
c. Only IP CAMERA connects to the internet
d. For fixed real IP, set up the IP into IP CAMERA. For dynamic IP, start PPPoE.

ii、 Configuration 2：



a. Internet Access：ADSL or Cable Modem
b. IP address：More than one real IP or one dynamic IP
c. IP CAMERA and PC connect to the internet
d. Device needed：Switch Hub
e. For fixed real IP, set up the IP into IP CAMERA and PC. For dynamic IP, start PPPoE.

iii、 Configuration 3：

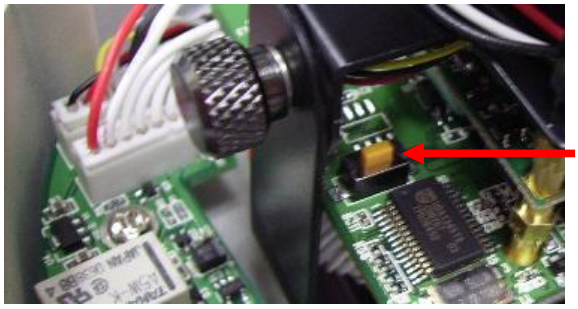


a. Internet Access：ADSL or Cable Modem
b. IP address：one real IP or one dynamic IP
c. IP CAMERA and PC connect to the internet
d. Device needed：IP sharing
e. Use virtual IP, set up port forwarding in IP sharing.

VII. Factory Default

i、 To recover the default IP address and password, please follow the following steps.

ii、 Remove power, and press and hold the button in the back of IP CAMERA.



iii、 Power on the camera. Don't release the button during the system booting.

iv、 It will take around 30 seconds to boot the camera.

v、 Release the button when camera finishes proceed.

vi、 Re-login the camera using the default IP (http://192.168.1.200), and user name (admin), password (admin).

VIII. Package contents

i、 IP CAMERA Network Camera

ii、 Adaptor

iii、 Ethernet Cable

iv、 CD title (User manual, IP installation Utility)

Appendix I

SD Card Recommended：

SanDisk 128M	Tracend 128M 80X
SanDisk 256M	Tracend 256M 80X
SanDisk 512M	Tracend 512M 80X
SanDisk 1G	Tracend 1G 80X
SanDisk 2G	Tracend 2G 80X
SanDisk 4G	Tracend 4G 80X